



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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September 13, 1984

TO: Jim Smith, Susan Linner, Thomas Tetting
FROM: Thomas L. Portle, Reclamation Soil Specialist *TL*
RE: Atlas Minerals Coal Soils Data from Roosevelt Operation as
Compared with Utah Mine Sites

Atlas Minerals has submitted information designed to establish that the general environment (with special emphasis on soils) is sufficiently similar between the partially reclaimed Roosevelt Mine Site in Colorado and their Utah operations to render test plots moot. The intent of the Board in allowing this substitution of environmental data for site specific test plots presumably involves an adequate showing of similarity.

Data provided to the Division on September 10, 1984 evidences a major difference in these soil materials.

Probably the most important parameter provided in the above letter in terms of predicative value of reclamation success is Sodium Absorption Ratio (SAR). While many of the parameters provided indicated a similar material including, key parameters such as pH and texture, the SAR was dramatically different. The average SAR level provided to represent the Utah Mines (MK Report) would be sufficient to classify the soil as whole as poor based on the SAR values with regard to reclamation potential according to Utah guidelines. The rational of averaging all the soils from distinct sites is as open to question as the concept of providing a generic reclamation plan for highly variable materials. Accordingly the range of SAR values (2.9-43) runs the whole range in terms of rating from good to unsuitable. The implication found on sheet 2 of the afore-mentioned letter that "the lower concentration of N and K" found at the Roosevelt site (SAR of 2.5) 'offsets the advantages offered by less sodic conditions' reveals a serious lack of understanding of the sodic problem and apparent ignorance of the existence of commercial fertilizers.

If it is indeed the will of the Board that these materials be shown to be similar, at least with regard to the most reclamation critical parameters (in order to be properly used in lieu of test plots), then it is my opinion as the Division Soil Scientist that while the Roosevelt soils would be rated as good, Atlas has completely failed to make such a showing.

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